October 16, 2018

Ms. Katherine Rubin
Manager of Wastewater Quality and Compliance
City of Los Angeles Department of Water and Power
111 North Hope Street, Room 1213
Los Angeles, CA 90012

Dear Ms. Rubin:

REQUEST FOR INFORMATION REQUIRED UNDER 40 CFR 122.21(r) FOR WASTE DISCHARGE REQUIREMENTS AND NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT RENEWAL APPLICATION - CITY OF LOS ANGELES, DEPARTMENT OF WATER AND POWER, CASTAIC POWER PLANT, CASTAIC, CA. (NPDES NO. CA0055824, CI NO. 6112)

The Los Angeles Department of Water and Power (hereinafter Discharger) operates the Castaic Power Plant (hereinafter Facility), a hydroelectric generating station located at 37700 Templin Highway in Castaic, California. The Facility provides peak-load power, generated by the movement of water from Pyramid Lake down a gradient (through a 7.2 mile long tunnel and penstocks) to turn seven turbines, with eventual discharge to Elderberry Forebay. Source water for power generation is taken from Pyramid Lake. Approximately 2.6 billion gallons per day (gpd) of water from Pyramid Lake is transferred to the Elderberry Forebay during the production of electrical energy. During off-peak hours, water is pumped back from Elderberry Forebay to Pyramid Lake. (Discharges from a water transfer are excluded from the NPDES permit program by 40 CFR 122.3). Other uses for water at the Castaic Power Plant include generator cooling, turbine cooling, and industrial uses (i.e., fire suppression system and floor wash down activities). Source water for these usages is taken from Pyramid Lake, and the Elderberry Forebay. The Facility discharges cooling water and other wastewaters from the facility to the Elderberry Forebay, a water of the United States. The discharge is regulated by Order R4-2013-0093 which was adopted by this Regional Water Board on June 6, 2013, and it expired on July 26, 2018.

The Discharger filed a report of waste discharge (ROWD) and submitted an application for renewal of its waste discharge requirements (WDRs) and the National Pollutant Discharge Elimination System (NPDES) permit on February 12, 2018. Pursuant to California Code of Regulations, Title 23, section 2235.4, the terms and conditions of an expired permit are automatically continued pending reissuance of the permit if the Discharger complies with all federal NPDES requirements for continuation of expired permits.

On March 13, 2018, Regional Water Board staff issued an ROWD complete letter. During development of the draft permit requirements, however, staff became aware that the operations at the cooling water intake structure are subject to Clean Water Act (CWA) section 316(b) and the corresponding requirements in 40 CFR sections 125.94 through 125.99, and 122.21(r). Regional Board staff have determined that the Facility is subject to these requirements based on

the applicability requirements in 40 CFR 125.91(a); the definitions of Actual Intake Flow (AIF) and Cooling Water Intake Structure in 40 CFR sections 125.92(a) and 125.92(f), respectively; and information and data provided by the Facility.

To explain further, CWA section 316(b) addresses adverse environmental impacts caused by the intake of once-through cooling water. These impacts include impingement of aquatic life on cooling water intake structures and entrainment of aquatic life within cooling water flows, where it is subject to thermal and physical stresses. CWA section 316(b) requires that NPDES permits include requirements for the best technology available (BTA) in the location, design, construction, and capacity of cooling water intake structures to minimize adverse environmental impacts. In August 2014, the U.S. Environment Protection Agency (U.S. EPA) established requirements under section 316(b) of the CWA for existing power generating facilities and existing manufacturing and industrial facilities that are designed to withdraw more than 2 million gallons per day (mgd) of water from waters of the United States and use at least 25 percent of the water they withdraw exclusively for cooling purposes (sections 125.94 through 125.99). If a facility includes a cooling water intake structure and has or requires an NPDES permit but does not meet the 2 mgd intake flow and the 25 percent thresholds, the facility is subject to permit conditions implementing CWA section 316(b) on a case-by-case basis using BPJ (best professional judgment) under 40 CFR 125.90(b).

All existing facilities with cooling water intake structures subject to section 125.94 are required to submit a permit application under section 122.21(r). The Discharger draws 14.3274 mgd of water per day from Pyramid Lake and Elderberry Forebay for generator cooling, turbine cooling, air compressor, and compressor after cooler.

Based on the foregoing, this letter requests the additional information required to evaluate the facility operations relative to those requirements. Therefore, the Discharger is required to update the previously submitted ROWD with the following information required under section 122.21 (r)(2) through (8). The due date to submit the information is **March 18, 2019**.

1. Section 122.21(r)(2) - Source Water Physical Data

    a. Narrative description and scaled drawings showing physical configuration of all source water bodies used by the facility;
    b. Identification and characterization of the source waterbody's hydrological and geomorphological features; and
    c. Location maps

2. Section 122.21(r)(3) - Cooling Water Intake Structure Data

    a. Narrative description of the configuration of the cooling water intake structure and where it is located in the water body and the water column;
    b. Latitude and longitude, in degrees, minutes, and seconds, of the cooling water intake structure;
    c. Narrative description of the operation of the cooling water intake structure, including design intake flows, daily hours of operation, number of days of the year in operation, and seasonal changes, if applicable;
    d. Flow distribution and water balance diagram that includes all sources of water to the facility, recirculating flows, and discharges; and

e. Engineering drawings of the cooling water intake structure.

3. Section 122.21(r)(4) - Source Water Baseline Biological Characterization Data

a. List of information in items **b** through **f** below that are unavailable and efforts made to identify sources of the information;
b. List of species (or relevant taxa) in the vicinity of the cooling water intake structure, including all life stages and their relative abundance;
c. Identification of the species and life stages identified above most susceptible to impingement and entrainment;
d. Identification and evaluation of the primary periods of reproduction, larval recruitment, and peak abundance for relevant taxa;
e. Data representative of the seasonal and daily activities (e.g., feeding and water column migration) of biological organisms in the vicinity of the cooling water intake structure;
f. Identification of all threatened, endangered, and other protected species that might be susceptible to impingement and entrainment at the cooling water intake structure;
g. Documentation of any public participation or consultation with Federal or State agencies undertaken;
h. Description of all methods and quality assurance procedures for sampling and data analysis, including a description of the study area, taxonomic identification of sampled and evaluated biological assemblages (including all life stages of fish and shellfish), and sampling and data analysis methods;
i. Identification of protective measures and stabilization activities that have been implemented, and description of how these measures and activities affected baseline conditions in the intake vicinity; and
j. List of fragile species, as defined at 40 C.F.R. section 125.92(m), at the facility.

4. Section 122.21(r)(5) - Cooling Water System Data

a. Narrative description of the operation of the cooling water system and its relationship to the cooling water intake structure, including all information required by 40 C.F.R. section 122.21(r)(5)(i);
b. Design and engineering calculations prepared by a qualified professional and supporting data to support the description required by item 4a; and
c. Description of existing impingement and entrainment technologies or operational measures, and summary of their performance, including but not limited to reductions in impingement mortality and entrainment due to intake location and reductions in total water withdrawals and usage.

5. Section 122.21(r)(6) - Chosen Method of Compliance with Impingement Mortality Standard

Chosen compliance method for the cooling water intake structure.

6. Section 122.21(r)(7) - Entrainment Performance Studies

Previously conducted studies or studies obtained from other facilities addressing technology efficacy and through-facility entrainment survival. Such submittals shall include a description of each study, together with its underlying data, and a summary of any conclusions or results.

7. Section 122.21(r)(8) - Operational Status

Description of the operational status of each generating, production or process unit that uses cooling water, including but not limited to the following:

a. Reductions in flow or changes in operations to meet the requirements of 40 C.F.R. section 125.94(c);
b. Descriptions of individual production processes and product lines;
c. Operating status, including age of each line;
d. Seasonal operation, including any extended or unusual outages that significantly affect current data for flow, impingement, entrainment, or other factors;
e. Any major upgrades completed within the last 15 years;
f. Any plans for decommissioning or replacing process units or production processes or product lines; and
g. Plans or schedules for any new units planned within the next 5 years.

Information available on entrainment which occurs at the intake structures and on the management of Pyramid Lake and Elderberry Forebay such as fish stocking operations including the size of the stocked fish and frequency of stocking would also be appreciated. Once the additional submittal, including all of the information requested above, is submitted to the Regional Water Board for review, additional information may be necessary to make the appropriate findings in the permit.

If you have any questions or need assistance in completing the application, please contact Cassandra D. Owens at (213) 576-6750 or Cassandra.Owens@waterboards.ca.gov or Rosario N. Aston at (213) 576-6653 or Rosario.Aston@waterboards.ca.gov.

Sincerely,

Cris Morris, PE. PMP.
Watershed Regulatory Section Chief

cc: See Mailing List

Mailing List (VIA Email Only)

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